

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claim 11 in accordance with the following:

1. (previously presented) A graphic display apparatus for a robot system comprising:

means for displaying and arranging a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;

means for storing the 3-D model of the robot and one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot; and

means for selecting one or more of the 3-D models stored in said storing means on the display screen, wherein

the 3-D model of the robot, or the 3-D model of the robot and the 3-D model of a peripheral equipment, a machine, or a part, which was selected by said selecting means, are displayed and arranged on the display screen, with at least a part of the system using the robot being approximated, and

3-D models of said peripheral equipment, said machine, or said part are classified by kinds, a plurality of different types are displayed on the screen for each of the classified kinds, and a 3-D model is selected from among the displayed types.

2. (previously presented) A graphic display apparatus for a robot system comprising:

means for displaying and arranging a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;

means for storing the 3-D model of the robot and one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot; and

means for selecting one or more of the 3-D models stored in said storing means on the display screen; and

means for adjusting dimensions of the 3-D model, selected by said selecting means, on the screen, wherein

the 3-D model of the robot of which dimensions were adjusted by said adjusting means, or the 3-D model of the robot and the 3-D model of a peripheral equipment, a machine, or a part, which was selected by said selecting means, of which dimensions were adjusted by said adjusting means, are displayed and arranged on the display screen, with at least a part of the system using the robot being approximated.

3. (previously presented) A graphic display apparatus for a robot system comprising:

means for displaying and arranging a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;

first storing means for storing the 3-D model of the robot;

second storing means for storing one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot;

means for selecting one or more of the 3-D models stored in said second storing means on the display screen; and

means for adjusting a dimension of the 3-D model selected by said selecting means, on the screen, wherein

the 3-D model of the robot, and the 3-D model of the peripheral equipment, the machine, or the part, which was selected by said selecting means, of which dimensions were adjusted by said adjusting means, are displayed and arranged on the display screen with at least a part of the system using the robot being approximated.

4. (previously presented) The graphic display apparatus for a robot system according to claim 1, further comprising means for displaying, on the screen, the robot motion corresponding to at least a part of a robot program, in animation.

5. (cancelled)

6. (previously presented) The graphic display apparatus for a robot system according to claim 2, further comprising means for adding a 3-D model of the peripheral equipment, the machine, or the part of the robot in said storing means.

7. (previously presented) The graphic display apparatus for a robot system according to claim 2, further comprising means for sending information to and receiving

information from a robot controller, wherein the shape of the 3-D model of the peripheral equipment, the machine, or the part, is adjusted based on position data which forms a physical feature of the actual peripheral equipment, the machine, or the part, sent from the robot controller through said information sending and receiving means.

8. (previously presented) The graphic display apparatus for a robot system according to claim 2, wherein a plan view of layout of an operation system using the robot is displayed on the display screen and the 3-D model of the peripheral equipment, the machine, or the part is arranged on the display screen in correspondence with the layout, to carry out modeling of a production system using the robot.

9. (previously presented) The graphic display apparatus for a robot system according to claim 3, wherein when the dimension of the 3-D model selected by said selecting means is adjusted by said adjusting means, coordination among the numerical values of a plurality of position data which constitute the 3-D model selected is considered.

10. (previously presented) The graphic display apparatus for a robot system according to claim 3, further comprising storing means for storing constraint conditions which stipulate the coordination among numerical values of a plurality of position data which constitute each 3-D model stored in the second storing means, wherein when the dimension of the 3-D model selected by said selecting means is adjusted by said adjusting means, coordination among the numerical values of a plurality of position data which constitute the 3-D model is considered using the constraint conditions stored in said constraint condition storing means.

11. (currently amended) A graphic display apparatus for a robot system, comprising:
a displaying and arranging unit to display and arrange a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;
a storing unit to store the 3-D model of the robot and one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot; and
a selecting unit to select one or more of the 3-D models stored in the storing unit on the display screen,

wherein the 3-D model of the robot, or the 3-D model of the robot and the 3-D model of a peripheral equipment, a machine, or a part, which was selected by the selecting unit, are displayed and arranged on the display screen, with at least a part of the system using the robot

being approximated, and

wherein the 3-D models of said peripheral equipment, said machine, and/or said part are classified by kinds, a plurality of different types are displayed on the screen for each of the classified kinds, and a 3-D model is selected from among the displayed types.

12. (previously presented) A graphic display apparatus for a robot system, comprising:

a displaying and arranging unit to display and arrange a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;

a storing unit to store the 3-D model of the robot and one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot;

a selecting unit to select one or more of the 3-D models stored in the storing unit on the display screen; and

an adjusting unit to adjust dimensions of the 3-D model, selected by the selecting unit, on the screen,

wherein the 3-D model of the robot of which dimensions were adjusted by the adjusting unit, or the 3-D model of the robot and the 3-D model of a peripheral equipment, a machine, or a part, which was selected by the selecting unit, of which dimensions were adjusted by the adjusting unit, are displayed and arranged on the display screen, with at least a part of the system using the robot being approximated.

13. (previously presented) A graphic display apparatus for a robot system, comprising:

a displaying and arranging unit to display and arrange a 3-D model of a robot on a display screen to cause the displayed model to move in animation on the screen;

a first storing unit to store the 3-D model of the robot;

a second storing unit to store one or more 3-D models of a peripheral equipment, a machine, or a part, which is used in a system using the robot;

a selecting unit to select one or more of the 3-D models stored in the second storing unit on the display screen; and

an adjusting unit to adjust a dimension of the 3-D model selected by the selecting unit, on the screen,

wherein the 3-D model of the robot, and the 3-D model of the peripheral equipment, the machine, or the part, which was selected by the selecting unit, of which dimensions were

adjusted by the adjusting unit, are displayed and arranged on the display screen with at least a part of the system using the robot being approximated.

14. (previously presented) A graphic display apparatus for a robot system, comprising:

a displaying and arranging unit to display and arrange one or more 3-D models of the robot system on a display screen to cause the one or more displayed 3-D model to move in animation;

a storing unit to store the one or more 3-D models; and

a selecting unit to select the one or more of the stored 3-D models that is displayed on the display screen,

wherein the one or more 3-D models, which was selected by the selecting unit, is displayed and arranged on the display screen according to constraint conditions relating to at least one dimension line of the one or more 3-D models of the robot system.